Source: All Sources: Area of Law - By Topic: Patent Law: Patents: U.S. Patents: Utility Patents

Terms: patno is 5712479 (Edit Search)

Pat. No. 5712479, \*

# 5,712,479

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Jan. 27, 1998

Spatial-velocity correlation focusing in time-of-flight mass spectrometry

**REISSUE:** Reissue Application filed Jun. 1, 1999 (O.G. Jul. 13, 1999) Ex. Gp.: 2878; Re. S.N.

09/324,098

INVENTOR: Reilly, James P., Bloomington, Indiana

Colby, Steven M., Bloomington, Indiana King, Timothy B., Bloomington, Indiana

ASSIGNEE-AT-ISSUE: Indiana University Foundation, Bloomington, Indiana (02)

**APPL-NO:** 566,140

**FILED:** Dec. 1, 1995

**REL-US-DATA:** 

Continuation of Ser. No. 327,618, Oct. 24, 1994 now patented 5,504,326 Apr. 2, 1996

**INT-CL:** [6] H01J 49#40

**US-CL:** 250#282; 250#287

CL: 250

SEARCH-FLD: 250#287, 282, 281, 286

**REF-CITED:** 

### U.S. PATENT DOCUMENTS

2,685,035	7/1954	*	Wiley	250#287
4,694,167	9/1987	*	Payne et al.	250#287
5,160,840	11/1992	*	Vestal	250#287
5,504,326	4/1996	*	Reilly et al.	250#287
5,510,613	4/1996	*	Reilly et al.	250#287

PRIM-EXMR: Nguyen, Kiet T.

LEGAL-REP: Woodard, Emhardt, Naughton, Moriarty & McNett

CORE TERMS: region, velocity, sample, equation, detector, voltage, grid, ion, time-of-flight, electric field, flight, parameter, focusing, peak, spread, laser, accelerating, width, correlation, spatial-velocity, spectrometer, algorithm, geometry, variable, spatial, acceleration, drift, ratio, experimental, electric

An apparatus and method for minimizing ion peak width measurements in a time-of-flight mass

Source: All Sources: Area of Law - By Topic: Patent Law: Patents: U.S. Patents: Utility Patents

Terms: patno is 5504326 (Edit Search)

Pat. No. 5,504,326, \*

# 5,504,326

# ◆ GET 1st DRAWING SHEET OF 10

Apr. 2, 1996

Spatial-velocity correlation focusing in time-of-flight mass spectrometry

INVENTOR: Reilly, James P., Bloomington, Indiana

Colby, Steven M., Bloomington, Indiana King, Timothy B., Bloomington, Indiana

ASSIGNEE-AT-ISSUE: Indiana University Foundation, Bloomington, Indiana (02)

ASSIGNEE-AFTER-ISSUE: Date Transaction Recorded: Dec. 22, 1997 ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ADVANCED RESEARCH & TECHNOLOGY INSTITUTE 501 NORTH MORTON STREET, SUITE 111

BLOOMINGTON, INDIANA 47404 Reel & Frame Number: 8861/0293

**APPL-NO:** 327,618

FILED: Oct. 24, 1994

CERTCORR: Dec. 24, 1996 a Certificate of Correction was issued for this patent

INT-CL: [6] H01J 49#40

**US-CL:** 250#282; 250#287

**CL: 250** 

**SEARCH-FLD:** 250#282, 287, 281, 282, 286

**REF-CITED:** 

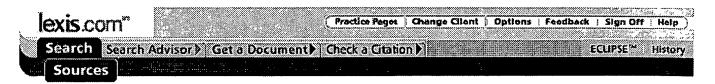
### U.S. PATENT DOCUMENTS

2,685,035	7/1954	4	Wiley	
4,694,167	9/1987	4	Payne et al.	250#287
5,160,840	11/1992	+	Vestal	250#282

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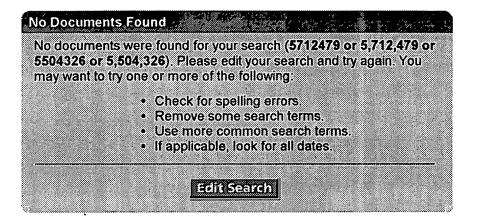
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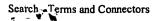
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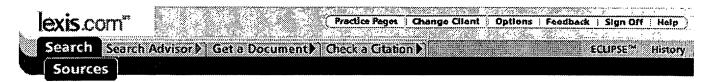
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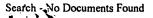
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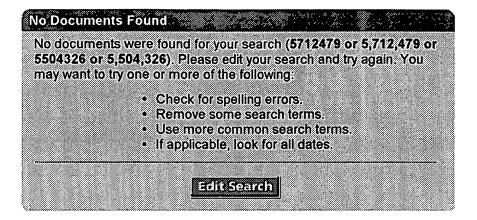
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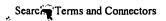
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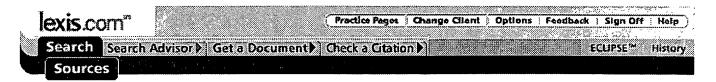




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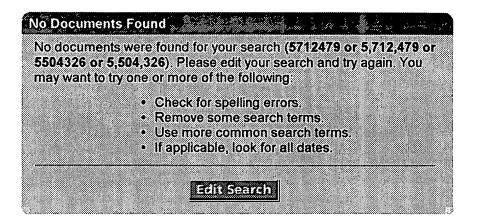
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1/39/1
DIALOG(R) File 345: Inpadoc/Fam. & Legal Stat
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12964583
Basic Patent (No, Kind, Date): US 5504326 A 960402
                                                   <No. of Patents: 004>
Patent Family:
    Patent No
                Kind Date
                                Applic No
                                            Kind Date
    US 5504326
                 Α
                     960402
                               US 327618
                                             Α
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                                                         (BASIC)
    US 5510613
                     960423
                               US 477198
                                             Α
                                                 950607
                 Α
                     980127
                               US 566140
    US 5712479
                                             Α
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                 Α
    WO 9613052
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                                                 951024
Priority Data (No, Kind, Date):
   US 327618 A 941024
    US 477198 A 950607
    US 327618 A3 941024
   US 566140 A 951201
   US 327618 A1 941024
PATENT FAMILY:
UNITED STATES OF AMERICA (US)
  Patent (No, Kind, Date): US 5504326 A 960402
    SPATIAL-VELOCITY CORRELATION FOCUSING IN TIME-OF-FLIGHT MASS
      SPECTROMETRY (English)
    Patent Assignee: INDIANA UNIVERSITY FOUNDATION (US)
   Author (Inventor): REILLY JAMES P (US); COLBY STEVEN M (US); KING
      TIMOTHY B (US)
    Priority (No, Kind, Date): US 327618 A
                                            941024
   Applic (No, Kind, Date): US 327618 A 941024
   National Class: * 250282000; 250287000
    IPC: * H01J-049/40
    CA Abstract No: * 124(26)355755Q; 124(26)355755Q
    Derwent WPI Acc No: * G 96-187815; G 96-221358; G 98-120071; G
      96-187815
    Language of Document: English
  Patent (No, Kind, Date): US 5510613 A
                                         960423
    SPATIAL-VELOCITY CORRELATION FOCUSING IN TIME-OF-FLIGHT MASS
      SPECTROMETRY (English)
    Patent Assignee: INDIANA UNIVERSITY FOUNDATION (US)
   Author (Inventor): REILLY JAMES P (US); COLBY STEVEN M (US); KING
      TIMOTHY B (US)
    Priority (No, Kind, Date): US 477198 A
                                            950607; US 327618 A3 941024
   Applic (No, Kind, Date): US 477198 A
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   National Class: * 250287000; 250281000
    IPC: * H01J-049/40
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    Derwent WPI Acc No: * G 96-187815; G 96-221358; G 98-120071; G
      96-221358
   Language of Document: English
  Patent (No, Kind, Date): US 5712479 A
                                         980127
    SPATIAL-VELOCITY CORRELATION FOCUSING IN TIME-OF-FLIGHT MASS
      SPECTROMETRY (English)
    Patent Assignee: INDIANA UNIVERSITY FOUNDATION (US)
   Author (Inventor): REILLY JAMES P (US); COLBY STEVEN M (US); KING
      TIMOTHY B (US)
    Priority (No, Kind, Date): US 566140 A 951201; US 327618 A1 941024
   Applic (No, Kind, Date): US 566140 A
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   Addnl Info: 5504326 960402 Patented
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    IPC: * H01J-049/40
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CA Abstract No: \* 124(26)355755Q

Derwent WPI Acc No: \* G 96-187815; G 96-221358; G 98-120071; G

98-120071

US 5510613

Language of Document: English

Ρ

UNITED STATES OF AMERICA (US)

Legal Status (No, Type, Date, Code, Text):

US 5504326 941024 US AE APPLICATION DATA (PATENT) Р (APPL. DATA (PATENT))

US 327618 A 941024

US 5504326 Ρ 941024 US AS02 ASSIGNMENT OF ASSIGNOR'S

INTEREST

INDIANA UNIVERSITY FOUNDATION SHOWALTER HOUSE

P.O. BOX 500 BLOOMINGTON, INDIANA; REILLY,

JAMES P.: 19941024; COLBY, STEVEN M.: 19941024; KING, TIMOTHY B. : 19941024

960402 US 5504326 P US A PATENT

US 5504326 P 961224 US CC CERTIFICATE OF CORRECTION

US 5510613 Р 941024 US AA PRIORITY

US 327618 A3 941024 US AE APPLICATION DATA (PATENT)

(APPL. DATA (PATENT))

US 477198 A 950607 US 5510613 960423 US A PATENT Ρ

950607

US 5510613 961022 US CC CERTIFICATE OF CORRECTION Ρ

US 5712479 941024 PRIORITY Ρ US AA

US 327618 A1 941024

US 5712479 Ρ 951201 US AE APPLICATION DATA (PATENT)

(APPL. DATA (PATENT)) US 566140 A 951201

P 980127 US A PATENT

US 5712479 US 5712479 Р 990713 US RF REISSUE APPLICATION FILED

(REISSUE APPL. FILED)

19990601

WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Patent (No, Kind, Date): WO 9613052 A1 960502

SPATIAL-VELOCITY CORRELATION FOCUSING IN TIME-OF-FLIGHT MASS SPECTROMETRY (English)

Patent Assignee: INDIANA UNIVERSITY FOUNDATION (US)

Author (Inventor): REILLY JAMES P; COLBY STEVEN M; KING TIMOTHY B

Priority (No, Kind, Date): US 327618 A 941024 Applic (No, Kind, Date): WO 95US13650 A 951024

Designated States: (National) CA; JP (Regional) AT; BE; CH; DE; DK;

ES; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE

Filing Details: WO 100000 With international search report

IPC: \* H01J-049/40

CA Abstract No: \* 124(26)355755Q

Derwent WPI Acc No: \* G 96-187815; G 96-221358; G 98-120071

Language of Document: English

WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Legal Status (No, Type, Date, Code, Text):

PRIORITY (PATENT) 941024 WO AA WO 9613052 P

US 327618 A 941024

WO 9613052 951024 WO AE APPLICATION DATA (APPL. DATA) Р

> WO 95US13650 A 951024

WO 9613052 Р 960502 WO AK DESIGNATED STATES CITED IN A PUBLISHED APPLICATION WITH SEARCH REPORT

				(DESIGNATED STATES CITED IN A PUBLISHED APPL. WITH SEARCH REPORT) CA JP
WO	9613052	P	960502	WO AL DESIGNATED COUNTRIES FOR
				REGIONAL PATENTS CITED IN A PUBLISHED
				APPLICATION WITH SEARCH REPORT (DESIGNATED
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				AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
WO	9613052	P	960502	WO A1 PUBLICATION OF THE INTERNATIONAL
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WO	9613052	P	960704	WO DFPE REQUEST FOR PRELIMINARY
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WO	9613052	P	960807	WO 121 EP: PCT APP. ART. 158 (1) (EP:
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WO	9613052	P	980304	WO 122 EP: PCT APP. NOT ENT. EUROP.
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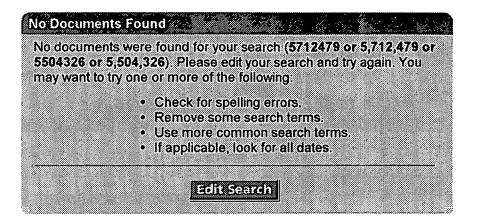
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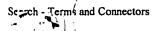
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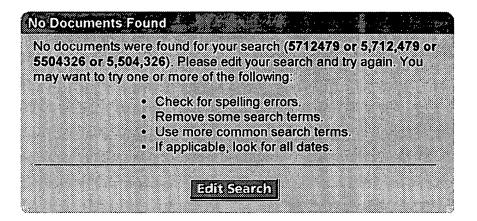
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PN - US 5712479 [US5712479]
AP - US 566140/95 19951201 [1995US-0566140]
DT - US-P
ACT - 19951201 US/AE-A
APPLICATION DATA (PATENT)
{US 566140/95 19951201 [1995US-0566140]}
- 19980127 US/A
PATENT
- 19990713 US/RF
REISSUE APPLICATION FILED
19990601
UP - 1999-30

1/1 LGST - (C) LEGSTAT PN - US 5504326 [US5504326] AP - US 327618/94 19941024 [1994US-0327618] DT - US-P ACT - 19941024 US/AE-A APPLICATION DATA (PATENT) {US 327618/94 19941024 [1994US-0327618]} - 19941024 US/AS02 ASSIGNMENT OF ASSIGNOR'S INTEREST INDIANA UNIVERSITY FOUNDATION SHOWALTER HOUSE P.O. BOX 500 BLOOMINGTON, INDIANA \* REILLY, JAMES P.: 19941024; COLBY, STEVEN M.: 19941024; KING, TIMOTHY B.: 19941024 - 19960402 US/A **PATENT** - 19961224 US/CC CERTIFICATE OF CORRECTION UP - 1999-19

1/1 PAST - (C) PAST
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PN - 5712479 A [US5712479]
DT - A (UTILITY)
OG - 1999-07-13
CO - REA
ACT - REISSUE APPLICATION FILED
SH - REISSUE APPLICATION FILED

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OG - 1996-12-24
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SH - CERTIFICATE OF CORRECTION

1/1 CRXX - (C) CLAIMS/RRX

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PN - 5,712,479 A 19980127 [US5712479]

PT - E (Electrical)

PA - Indiana University Foundation

ACT - 19990601 REISSUE REQUESTED

Issue Date of O.G.: 19990713

Reissue Request Number: 09/324098

Examination Group responsible for Reissue process: 2878

UP - 1999-27 UACT- 1999-07-13

1/1 CRXX - (C) CLAIMS/RRX

AN - 2704412

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PT - E (Electrical)

PA - Indiana University Foundation

ACT - 19971222 REASSIGNED

ASSIGNMENT OF ASSIGNOR'S INTEREST

Assignor: INDIANA UNIVERSITY FOUNDATION DATE SIGNED: 06/30/1997

Assignee: ADVANCED RESEARCH & TECHNOLOGY INSTITUTE 501 NORTH MORTON

STREET, SUITE 111 BLOOMINGTON, INDIANA 47404

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Contact: LOCKE REYNOLDS BOYD & WEISELL A. JAMES RICHARDSON, ESQ. 1000 CAPITAL CENTER SOUTH 201 NORTH ILLINOIS ST. INDIANAPOLIS, IN 46204

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